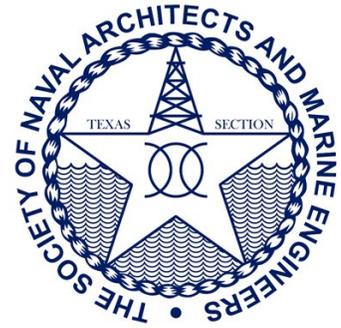




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SUBSEA SYSTEMS RELIABILITY IMPROVEMENTS INSPIRED BY THE AEROSPACE INDUSTRY

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*Proceedings of the 21st Offshore Symposium, February 2016, Houston, Texas
Texas Section of the Society of Naval Architects and Marine Engineers*

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ABSTRACT

Aerospace industry has been one of the first industries to use and develop reliability techniques before to be followed by numerous industries. The Oil and gas industry has now embraced the idea of reliability analyses for driving design improvements as the potential high costs associated with equipment failures lead to the desire of a highly reliable system and/or a reduction in system uncertainty. Spread of ultra-deep water and developments of recent Subsea processing technologies of this last decade induce the need of state of the art Subsea components as a failure below 1,500m water depth becomes a real challenge, not only in terms of cost but also in terms of environmental safety and reputation for the operating company.

Experience in the highly regulated and disciplined Aerospace business, has shown that the development of system engineering techniques and software tools benefit from finding applications across industries.

The paper will first introduce the main challenges faced by both the Subsea and the Aerospace industries.

The purpose is then to show ways in which safety and reliability techniques from Aerospace already proven across many industries, can add value for the oil and gas organizations.

This paper will also discuss the solutions found for other extreme industries that have relevance to the Subsea application. We will conclude by suggesting ways in which industries can collaborate in order to support and enhance a business model that is not always optimized.

Keywords: *SNAME, Reliability, Aerospace, Offshore, Subsea, Symposium*